IN THE SPECIFICATION:

Please amend the Specification as follows:

On Page 1, above line 1, please insert the following:

--CROSS REFERENCE TO RELATED APPLICATIONS

Applicants claim priority under 35 U.S.C. §119 of German Application No. 199 45 771.9 filed September 24, 1999. Applicants also claim priority under 35 U.S.C. ~~§120~~ 365 of PCT/EP00/09275 filed September 22, 2000. The international application under PCT article 21(2) was not published in English.

BACKGROUND OF THE INVENTION

1. Field Of The Invention--

On Page 1, please amend the paragraph in lines 1 to 3 to read as follows:

--The invention relates to a method for gasifying organic materials and mixtures of materials as defined in the ~~introductory part of claim 1.~~ invention.--

On Page 1, please insert the following between lines 3 and 4:

--2. The Prior Art--

On Page 1, please amend the paragraph in lines 4 to 17 to read as follows:

--A process for gasifying organic substances and mixtures of substances is known from US-PS 4,568,362 ~~[1],~~ (1), in which the organic substances are admitted into a pyrolysis reactor, in which these substances come into contact with a heat-carrying medium. Such contact leads to a high rate of pyrolysis and the substances are converted into pyrolysis products, i.e. pyrolysis gases containing condensable substances and solid, carbon-containing substances. The thermal energy required for the pyrolysis stage is generated by combusting the solid, carbon-containing residue. In a second reaction zone, the tar-containing pyrolysis gases are subjected to cracking reactions and reaction with steam in such a way that a gas product with a high calorific value is obtained.--

Please amend the paragraph bridging Pages 2 and 3 to read as follows:

--A process for gasifying organic substances and substance mixtures is known from DE-PS 197 55 693 ~~[2].~~ (2). In this process, the organic substances are brought into contact with a heat-carrying medium in a migrating-bed reactor, which leads to rapid pyrolysis, with conversion of the organic substances into a carbon-containing, solid residue, on the one hand, and a pyrolysis gas that consists of condensable volatiles and gaseous components on the other.--

On Page 5 of the Specification, please insert the following between lines 9 and 10:

--SUMMARY OF THE INVENTION--

Please amend the paragraph bridging Pages 5 to 6 of the Specification to read as follows:

--Said problem is solved by the combination of features specified in ~~claim 1.~~ the invention. In a manner similar to ~~[2],~~ (2), the basic idea of dividing the method in three steps of the process that can be carried out in simple way, is pursued further as follows: rapid pyrolysis, recovery of the product gas from the pyrolysis gases after process steam has been added to the

homogeneous gas phase reactions with feed of heat; and generation of the heat required for the pyrolysis and initiation of the reactions of the gas phase by combusting pyrolysis coke of a solid, carbon-containing residue. However, a substantial expansion of the idea is represented by the fact that the heat of the firing stage is transferred into the heat-carrying medium in a defined and forcible manner, because if the pyrolysis coke and the heat-carrying medium are admitted into the firing stage in the form of a mixture, as it has been described in ~~[2],~~ (2), it has to be expected that de-mixing of the heat-carrying medium and the pyrolysis coke will occur, for example on a combustion grate, so that the heat-carrying medium will not only be heated up inadequately in the course of the combustion process, but will even be cooled by the current of combustion air streaming in through the grate. A defined and enforced heat transfer is conceivable only in a rotating tubular furnace because the solids are intensively mixed there beyond the stoking effect of a grating. However, in conjunction with the present method, a rotating tubular furnace would represent a very costly firing system with poor admixture of the air, while a fluidized bed is disregarded for the reasons stated above.--

Please amend the paragraph bridging Pages 11 to 12 of the Specification to read as follows:

--According to the invention, the method of the invention opens up at least two basic possibilities for controlling the circulation of the heat-carrying medium. With respect to the heat-carrying medium, it is possible to successively connect the second reaction zone and the pyrolysis reactor one after the other, in series or in parallel. The important advantage offered by the series connection lies in the simplicity of the equipment: the heating-up zone, the second reaction zone and the pyrolysis reactor are interconnected among each other, so that the heat-carrying medium is moving through this arrangement, driven by force of gravity from the top downwards. Versus the arrangement described in ~~[2],~~ (2), the pyrolysis stage has been changed to the extent that the pyrolysis no longer needs to be carried out with a very much greater amount of heat-carrying medium having, however, a distinctly lower temperature. If, for example, the heat-carrying medium enters the second reaction zone for the reforming purpose with a temperature of around 1050ºC, it will exit from said zone ~~wile~~ while still having temperature of only

about 750ºC. With the parallel connection, the pyrolysis stage is not changed vis-à-vis the arrangement described in ~~[2].~~ (2). However, a higher expenditure in terms of equipment has to be expected due to the fact the hot stream of heat-carrying medium has been divided, allocating it to the pyrolysis reactor and the second reaction zone, and is subsequently united again. The parallel connection, therefore, has to be given preference in cases in which it is advantageous if the charged material comes into contact with particularly hot heat-carrying medium.--

Please amend the paragraph beginning on Page 12 in lines 21 to 26 and extending over all of Page 13 and including lines 1 to 15 on Page 14, as follows:

--Finally, the addition of process steam to the pyrolysis gases prior to the reforming step is carried out in the second reaction zone. This is addressed in the following as well. The process steam has to be admixed in an excess amount with respect to the homogeneous reactions occurring in the gas phase that have to be expected to occur, because any possible formation of carbon black can be consequently suppressed only in this way. A basis

for this consists in maintaining a defined steam concentration in the fresh product gas, specifically amounting to, for example 20% by volume or more. On the other hand, it has to be expected that controlling the addition of process steam quantitatively with a steam concentration serving as the measuring quantity will require a great deal of expenditure and will be costly. It is deemed to be better to adjust a fixed value that is controlled via a measurement of the quantity depending on the capacity, which possibly may be carried out in any case. One possibility for realizing the method as defined by the invention that needs to be mentioned in any case lies in the selection of the site where the process steam is mixed with the pyrolysis gas. This mixing process has to take place prior to the entry of the mixture into the second reaction zone of the reformer at the latest; however, said site may be shifted upstream to the pyrolysis reactor, and there to any desired location within the pyrolysis reactor situated up to its lower end. The lower end of the pyrolysis reactor is meant in this connection to be the site from where the mixture comprising the heat-carrying medium and the solid, carbon-containing residue exits. This does change the division of the heat realized between the pyrolysis and the

reforming stages; however, flushing of the pyrolysis with steam, which is added within the vicinity of the site where the solids exit from the pyrolysis reactor, offers advantages in the last analysis under a number of aspects: firstly, the temperature of the pyrolysis gas is not lowered in this way at any point on its way to the second reaction zone, so no condensation has to be expected to occur. Secondly, it is known from ~~[3]~~ (3) that it is possible to increase the yield of volatile components in the pyrolysis of biomasses by rinsing with steam. This can be advantageous because an excessively high yield of solid pyrolysis product beyond the heat requirement of the method will reduce the yield of product gas and in connection therewith the degree of efficiency of the cold gas. Thirdly and finally, this constitutes a preventive measure for avoiding possible leakage of pyrolysis gas in the direction of the separation stage, where the heat-carrying medium and the pyrolysis gas are separated.--

On Page 14 between lines 15 and 16, please insert the following:

--BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a first embodiment of the present invention;

FIG. 2 shows a modified portion of the system shown in FIG. 1; and

FIG. 3 shows a further embodiment according to the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS--

On Page 26 of the Specification, please amend lines 11 to 16 to read as follows:

--(1) ~~[1]~~ US-PS 4,568,362

(2) ~~[2]~~ DE-PS 197 55 693

(3) ~~[3]~~ M. Steseng, A. Jensen, K. Dam-Johansen, M. Gronil: Experimental Investigation and Kinetic Modelling of Biomass Pyrolysis; Proc. 2nd Olle Lindström Symposium, Stockholm June 8 to 11, 1999, pp 97-104.--